

The Scope

Fall 2016

MUSC DEPARTMENT OF OTOLARYNGOLOGY

HEAD & NECK SURGERY

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Paul R. Lambert, M.D.



Celebrating Successes

CHAIRMAN'S CORNER

INSIDE

- Chairman's Corner
- Continuing Education
- Clinical Update
- Research Realm
- Honors & Awards
- Farewell & Welcome
- Faculty
- CME Events

It seems, at least to me, that the pace of academic medicine is accelerating; terminal velocity has not yet been reached. On the positive side of this acceleration equation are the many innovations and discoveries in our field that impact patient care. On the negative side, increasing bureaucratic and reimbursement constraints affect how we deliver that care.

Within this context, I believe it is critical to celebrate successes. We set individual and departmental goals, but often once they are achieved we simply move to the next one. Similar to a busy day in the OR, we minimize the amazing successes we have achieved.

A periodic reflection of our accomplishments is healthy individually and corporately; it helps combat cynicism and burnout. Reflections coupled with tangible, celebratory events are ideal.

This Chairman's Corner is a public "Thank You" to all the members of the MUSC Department of Otolaryngology-Head and Neck Surgery for enabling the following successes this year:

- ★ Residency program ranked Top 10 for several years running
- ★ Implementation of our T32 grant

- ★ Top 10 in NIH funding for departments of otolaryngology-head and neck surgery (for several decades)
- ★ First RO1 grant by a clinical faculty member-Zach Soler, M.D. in the rhinology/sinus surgery division (several faculty have K grants)
- ★ Over 125 publications this last FY
- ★ 10 National CME courses
- ★ Growing clinical trials program with record number of active trials this year - 21 non-cancer managed Departmentally
- ★ 2016-2017 Best Hospitals, U.S. News & World Report ranked MUSC Health ENT #14 in the country



A longer list could be created, but the point of emphasis is the amazing dedication and work ethic of all our faculty, nurses, and administrative staff that have made these successes possible. **THANK YOU!**

Paul R. Lambert, M.D.

Paul R. Lambert, M.D., Professor and Chair
Otolaryngology - Head & Neck Surgery

Continuing Education



The Charleston Sleep Surgery Symposium

Our 5th Annual Charleston Sleep Surgery Symposium was held at the Fancis Marion Hotel on February 5 - 6, 2016 under the direction of **M. Boyd Gillespie, M.D., MSc.** Over 50 otolaryngologists from 19 states and Mexico attended the lectures, discussions, live patient demonstration, and hands-on labs focused on procedures for snoring and sleep disordered breathing. Guest professors included **Qanta Ahmed, M.D.**, SUNY-Stoney Brook, NY, Winthrop University Hospital, NY; **Lon R. Doles, D.D.S.**, Oral Maxillofacial Associates, Charleston, SC; **Tod C. Huntley, M.D., FACS.** Center for Ear Nose Throat & Allergy, PC, Indiana University, and St. Vincent Health, Indianapolis, IN; **Brian W Rotenberg, M.D., MPH, FRCS,** Western University, London, ON; **Roldolfo Lugo Saldana, M.D.,** ISSSTE. Constitution Hospital, Monterrey NL Mexico; **Mas Takashima, M.D.,** Baylor College of Medicine, Houston, TX.



The Charleston Pediatric ENT Update

The 3rd Annual Charleston Pediatric ENT Update was held March 12, 2016 on the MUSC campus directed by **David R. White, M.D.** This comprehensive full-day course for pediatricians, family practitioners, and otolaryngologists provided up-to-date guidelines to implement into daily practice, promote quality and efficient care, and tackle challenging ENT diagnoses with confidence. Keynote speaker was **Karen B. Zur, M.D.** of the Children's Hospital of Philadelphia, joined by guest speakers **Steven L. Goudy, M.D.**, Emory University, and **Carlton J. Zdanski, M.D.**, University of North Carolina. Participants traveled as far as Washington and New York to attend. We hope you will join us for the the next presentation February 11, 2017.



Annual Southern States Rhinology

This three day course held April 21 - 23, 2016 at Kiawah Island Resort and the MUSC campus provided a comprehensive update on the medical and surgical practices of rhinology for practicing rhinologists and sinus surgeons. The course included a hands-on dissection laboratory, featuring state-of-the-art endoscopic instrumentation, video, and image guidance systems. Lab Director: **Rodney J. Schlosser, M.D.**



The 5th MUSC Pediatric Audiology Conference: Implantable Devices and Assistive Technology

The Pediatric Audiology Conference directed by **Meredith Holcomb, Au.D., CCC-A** was held April 29, 2017 at the Courtyard Marriott Mount Pleasant for all providers involved in the care of hearing impaired children. Key topics provided up-to-date knowledge to enable attendees to employ best current practices when caring for this secto of children. Guest speakers were **Jace Wolfe, Ph.D., CCC-A,** Hearts for Hearing Foundation, Oklahoma; and **Terry Zwolan, Ph.D., CCC-A,** University of Michigan. Professionals of various disciplines from six states attended this year's conference.

Clinical Research Fellowship Opportunities

The MUSC Department of Otolaryngology – Head and Neck Surgery is pleased to offer a one-year **Clinical Research Fellowship Program.** As of the 2016-17 academic year, ten classes of Fellows have been selected, totaling 30 students. This fellowship is ideally suited for medical students seeking a research year between the third and fourth years of medical school who are interested Otolaryngology, and seeking to enhance their existing research skills and experience.

Under the direction of **Shaun A. Nguyen, M.D., FAPCR,** fellows are introduced to the fundamental principles of conducting clinical research for new therapies in otolaryngology, including how to design,

implement and analyze trials with IRB approval; conduct trials with ethical and good practice standards; and to organize results for publication and reporting. Fellows have an opportunity to participate in otolaryngology resident and faculty research and design and conduct studies of their own. Trainees are expected to present their work at regional and national meetings and publish their findings when appropriate.

The MUSC Clinical Research Fellowship Program is endowed by **Drs. Felizardo Camilon and Althea Molarte,** and **Mr. and Mrs. Deming Xiao and Julia Chu.**

Temporal Bone Dissection Course

Our intensive two-day otology course was held on the MUSC campus May 6-7, 2016 under the direction of **Ted A. Meyer, M.D., Ph.D.** This course, designed for practicing otolaryngologists, focused on procedures for chronic ear disease and included hands-on training in our temporal bone dissection lab. Distinguished guest speaker was **Ravi N. Samy, M.D., F.A.C.S.**, University of Cincinnati, OH. The course was well attended by practitioners traveling from five states. *Join us for the 2017 course March 24-25. visit our website often for updates: ent.musc.edu/cme.*



16th Annual Charleson Magnolia Conference

Our distinguished guest speakers for the 2016 Magnolia Conference held June 3-4, 2016 were **Gerald S. Berke, M.D.**, UCLA Medical Center, Los Angeles, CA; **Jeffrey M. Bumpous, M.D., FACS**, University of Louisville, Louisville, KY; and **David S. Haynes, M.D., FACS**, Vanderbilt University Medical Center, Nashville, TN. Participants came from around the country for the presentations and round table lunch discussions covering the breadth of our specialty, directed by **Paul R. Lambert, M.D.** The weather was ideal, providing the perfect setting to enjoy historic Charleston, the beaches, golf, and the Spoleto Festival USA. Our 2017 course will be June 2-3, a great time to come to Charleston!



The ABCs of Maxillofacial Prosthodontic Medical & Dental Billing

Our inaugural MFP Billing course was held on at the Courtyard Charleston Historic District Hotel on June 17, 2016, under the direction of **Betsy K. Davis, D.M.D., MS.** The course was created out of the demand for information on the various topics covered. Participants included dentists, nurses, and administrative professionals from 13 states, who traveled from as far as California and Maine. It was a beautiful Charleston day and many stayed to enjoy the weekend.



SLEEP APNEA

Impacting Your Life?



Do you have severe sleep apnea, but haven't had success with CPAP?

Right now, sleep specialists at **Medical University of South Carolina** are accepting participants for the THN Clinical Study. The study is evaluating THN Sleep Therapy - an investigational device that is implanted and is designed to reduce or eliminate sleep apnea episodes.

▶ Take the Next Step

To see if you might qualify, please call: 1-888-975-3370 or visit: www.THNstudy.com

Facial Reanimation in Bell's Palsy with Incomplete Recovery

Samuel L. Oyer, M.D.

Bell's palsy is the most common cause of acute facial paralysis affecting between 20-40:100,000 individuals¹. Although the exact cause is unknown, viral reactivation in the geniculate ganglion or autoimmune triggered inflammation are the prevailing causative theories. Acute treatment typically consists of antiviral and corticosteroid therapy, with combination treatment now supported by a recent Cochrane review². The acute phases of facial paralysis can be quite devastating, but fortunately most patients demonstrate complete or nearly complete recovery over a period of several months. Despite an overall favorable prognosis, up to 30% of patients have incomplete recovery with long-lasting sequelae that can significantly impair facial function, social performance, and facial appearance¹. This number may underestimate the true burden of disease, however, because among patients considered 'cured' by their physician 20-30% continue to have troubling symptoms related to facial paralysis³.

Recovery of facial function after Bell's palsy typically begins in the first several weeks with return of tone preceding recovery of motion. Over the next several months, facial movement continues to improve for most patients. At this point the recovery pattern branches, with many patients proceeding toward full recovery, while others begin to develop aberrant reinnervation that heralds a path toward incomplete recovery. **(Figure 1)** Patients may begin to develop hypercontracture and facial tightness often in the midface, platysma, and jaw line. This hypercontracture can add to facial asymmetry by deepening the nasolabial fold, narrowing eye opening, and depressing the corner of the mouth. Often hypercontracture is accompanied by a decrease in facial excursion and some patients feel like they have a recurrence of their Bell's palsy due to decreased motion. Additionally, synkinesis may develop that causes unwanted concurrent facial motions such as eye closure and chin dimpling with mouth movement or midfacial and platysmal tightening with eye closure. **(Figure 2)** The pathway toward incomplete recovery adds

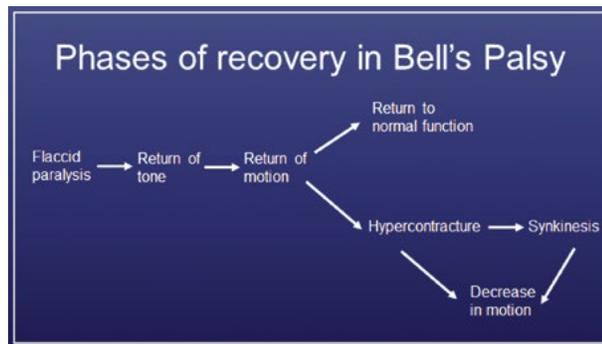


Figure 1. Following return of motion in Bell's palsy recovery branches toward normal function or incomplete recovery with hypercontracture, synkinesis and decreased motion. Intervention initiated once motion has begun to return can help minimize incomplete recovery

significantly to the psychosocial stress of a patient who has just recently begun to see recovery from a very alarming facial paralysis. Much emphasis has been placed on early treatment of Bell's palsy to maximize recovery, with relatively little focus on managing the sequelae of incomplete recovery.

Aside from ensuring prompt evaluation and medical treatment of Bell's palsy, what else can be done to minimize these sequelae? Experience with facial neuromuscular retraining has been promising for improving hypercontracture, minimizing synkinesis, and maximizing symmetry of facial movement particularly when the treatment is started as soon as these sequelae begin to manifest⁴. This type of therapy is carried out by specially trained Physical or Occupational Therapists and is individualized to each patient's paralysis and symptoms. Treatment involves a series of initial face-to-face sessions that shifts to a more patient-driven home regimen as the treatment progresses. Initial treatment often emphasizes education of facial muscle anatomy and function as well as facial massage and relaxation techniques. Facial motion is then practiced with an emphasis on small, precise facial movements that focus on achieving as much symmetry as possible while minimizing unwanted synkinetic movement. This may be augmented with biofeedback using a mirror or surface EMG electrodes.

Despite initiation of facial retraining therapy, some patients continue to have problematic synkinesis or spasm. In these patients,

targeted chemodenervation with botulinum toxin injection can be useful to selectively weaken the involved muscles. Injection sites and doses vary for each patient but synkinesis treatment typically targets the orbicularis oculi, mentalis, and platysma on the affected side. For symptoms of hypercontracture, treating the depressor anguli oris and platysma on the affected side can help alleviate neck tightness and downward pull on the oral commissure. Many patients feel tightness in the midface, but injections to this area should be performed very judiciously if at all so as not to further weaken smile excursion that is already deficient on the affected side. Certain patients may benefit from small doses to the buccinator muscle to help with mouth tightness and banding⁵. Overall facial symmetry and balance is improved with injections to the contralateral forehead, glabella, and lower lip. Patients are educated on the temporary nature of botulinum toxin injections and the potential need for adjustments to dose or location based on treatment response. Chemodenervation in this manner has been shown to positively affect quality of life⁶ and is often combined with facial retraining therapy for maximal results⁴.

For some patients limited facial movement, particularly asymmetric smile excursion, is the most bothersome sequelae of incomplete recovery. Most patients recover reasonable facial symmetry at rest and show some smile excursion, so achieving improved smile production without incurring additional facial asymmetry can be a very nuanced challenge.



Figure 2. Patient with incomplete recovery 14 months after Bell's palsy on left who demonstrates good symmetry at rest (a), but synkinetic midfacial movement with eye closure (b, solid arrow) and eye closure with smile (c, dashed arrow).

Some patients may benefit from nerve transfer procedures to replace or supercharge native nerve branches and add power to the native facial muscles. Historically, the hypoglossal nerve was the donor nerve of choice, but more recently there has been interest in transferring the masseteric branch of the trigeminal nerve for this purpose. Advantages of the masseteric nerve include proximity to facial nerve in the same operative field allowing for direct neural coaptation to the buccal branch of the facial nerve without an interposition graft. There is also limited morbidity seen with sacrifice of the masseteric nerve and there may be natural overlap between the actions of jaw clench and smile which allow some patients to trigger masseteric function with less conscious effort. In general, nerve transfers for complete paralysis are most successful in the first 2 years following paralysis, but the optimal time frame for benefit has not been established for cases of partial nerve function.

Additional options for re-animating the smile in a patient who is not a candidate for a nerve transfer include minimally invasive temporalis tendon transfer (MIT3)⁷ and gracilis free muscle transfer. The MIT3 can be approached through an intraoral or cutaneous incision placed in the nasolabial fold. The temporalis tendon is detached from the mandible and advanced to the oral commissure. If the

tendon does not reach adequately a fascia lata extension graft can be used. The appropriate tension of inset can be tested intraoperatively with electrical stimulation of the temporalis muscle to optimize the potential post-operative excursion⁸. With this technique activating the temporalis with jaw clench will translate to elevation of the oral commissure and smile. Alternatively, a free muscle transfer using the gracilis muscle can be used to replace ineffective muscles to re-create the desired smile vector. (Figure 3) The gracilis is removed from the inner thigh along with its neurovascular pedicle and transferred to the face through a facelift-style incision. Vascular anastomoses are performed to the facial vessels and the nerve is connected either to the buccal branch of the facial nerve on the opposite side via a previously placed sural nerve graft, or to the masseteric nerve on the same side of the face. This procedure requires a delay of 4-6 months for the neural connection to activate and continues to strengthen over 1 year.

Bell's palsy fortunately has a very good overall prognosis, but for those patients who do not fully recover, persistent issues that seem minor to many physicians remain quite problematic and detrimental to patients who are affected. There are options for optimizing recovery, and outcomes are typically best when started early. Patients who are experiencing

these issues should be encouraged to seek evaluation at a center with experience in treating facial paralysis.

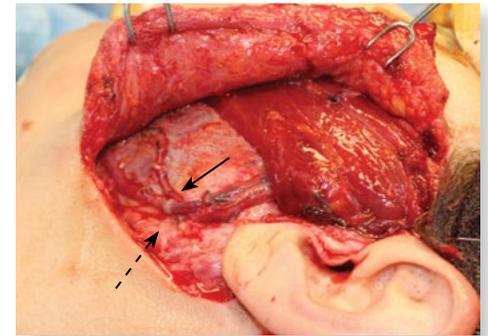


Figure 3. Gracilis muscle flap in place with vascular anastomoses to the left facial artery (solid arrow) and vein (dashed arrow). Neural connection is to the masseteric nerve that situated deep to the gracilis flap.



Samuel L. Oyer, M.D. originally grew up in Indiana where he attended undergraduate and medical school at Indiana University. Following this, he moved to Charleston where he completed residency training in Otolaryngology (ENT) at MUSC. During this time he was drawn to the field of facial plastic and reconstructive surgery and pursued additional fellowship training in this field at Johns Hopkins University with four mentors who are among the nation's leaders in this specialty. This training focused exclusively on cosmetic and reconstructive surgery of the face and neck. He was awarded the Jack Anderson Award for the highest score in the nation on the American Board of Facial Plastic & Reconstructive Surgery examination.

Following fellowship, he was delighted to return to MUSC and join the faculty in the Otolaryngology Department. Dr. Oyer treats patients with a wide range of facial reconstructive and cosmetic needs. He has a particular clinical interest in facial reanimation of patients suffering from facial paralysis and has performed clinical research in this area exploring outcomes of nerve grafting and smile restoration surgery.

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Research Realm

The MUSC Hearing Research Program

Judy R. Dubno, Ph.D.

The Hearing Research Program is focused on advancing the understanding of normal and pathologic mechanisms of hearing and communication, with the goals of improving diagnostic methods and developing innovative intervention and prevention strategies related to hearing loss. The research uses behavioral, electrophysiologic, pupillometric, neuroimaging, and genetic methods in humans, and cellular/molecular, physiological, and otopathologic methods in animal models of hearing loss and human tissue. The research is conducted by investigators primarily in the Department of Otolaryngology – Head and Neck Surgery and the Department of Pathology and Laboratory Medicine, whose collaborative activities are currently supported by intramural, foundation, and federal grants. This includes a P50 Clinical Research Center, which has been funded by NIH/NIDCD for more than 27 years and supports a longitudinal study of hearing in adults across the lifespan. The Hearing Research Program is directed by **Judy R. Dubno, Ph.D.** and includes core faculty **Jayne B. Ahlstrom, Mark A. Eckert, Kelly C. Harris, Hainan Lang, Lois J. Matthews, Bradley A. Schulte, Kenneth I. Vaden,** and emeritus faculty **John H. Mills** and **Richard A. Schmiedt**. Co-Investigators include faculty in the College of Medicine Departments of Public Health Sciences, Radiology, Regenerative Medicine and Cell Biology, and the College of Health Professions' Department of Healthcare Leadership and Management. Core faculty maintain active collaborations with faculty in the Neuroscience Institute, Center for Biomedical Imaging, and investigators in several MUSC departments and colleges and throughout the world.

Through its scientific activities, the Hearing Research Program also provides the next generation of scientists with interdisciplinary research training across areas of technical and conceptual expertise, supported, in part, by an NIH/NIDCD T32 Institutional Training Grant. Currently, otolaryngology residents, postdoctoral fellows, graduate students, undergraduates, and high school students are working within the Hearing Research Program on basic, translational, and clinical research projects related to auditory neuroscience.

A primary focus that links many laboratories within the Hearing Research Program is age-related hearing loss. Hearing loss is among the most common chronic conditions of aging, ranking first among males and fourth among females. Studies of hearing across the lifespan reveal that changes in auditory function can begin in middle age. In the next 30 years, the number of persons over age 65 will nearly double, substantially increasing the number of Americans with hearing loss. Currently, only ~20% of those who require intervention seek help for their condition. To meet these challenges, basic and clinical research focused on mechanisms of age-related hearing loss, new diagnostic procedures, improved options for treatment and rehabilitation, and methods to prevent or delay the onset of presbycusis, is of great importance.

A central theme of the research on age-related hearing loss is metabolic presbycusis, or the degeneration of the cochlear lateral wall and decline of the endocochlear potential, which largely accounts for age-related threshold elevations observed in laboratory animals raised in quiet and may underlie the characteristic audiogram of older humans.

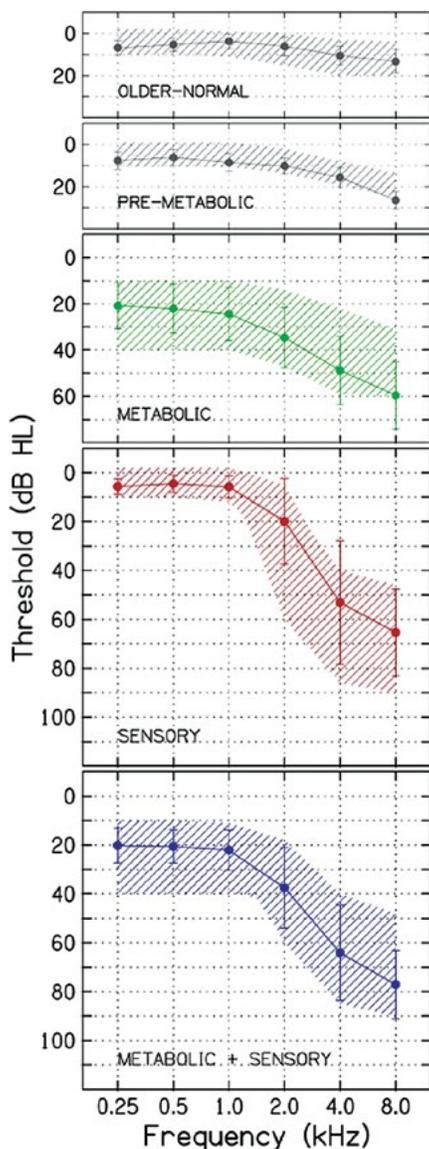


Figure 1. Schematic boundaries of five phenotypes of age-related hearing loss (shaded regions). Symbols and error bars are mean thresholds (± 1 standard error) of audiograms from the human subject database.



Judy R. Dubno, Ph.D., is a Professor and Director of the Hearing Research Program in the Department of Otolaryngology–Head and Neck Surgery. Her research on auditory perception, aging, hearing loss, and hearing aids is supported by P50 and R01 grants from the National Institutes of Health (NIH)/National Institute on Deafness and Other Communication Disorders (NIDCD). Dr. Dubno also directs a new T32 Institutional Training Grant from NIH/NIDCD, which supports research training of predoctoral PhD students, MD and PhD postdoctoral

fellows, and health professional students. She previously served on the Advisory Council of the NIH/NIDCD, four National Academies of Sciences, Engineering, and Medicine consensus committees, as President and Secretary-Treasurer of the Association for Research in Otolaryngology, and as President of the Acoustical Society of America. Dr. Dubno is a Fellow of the Acoustical Society of America and the American Speech-Language-Hearing Association, and the recipient of the James Jerger Career Award for Research in Audiology.

The “audiometric phenotype” associated with metabolic presbycusis (a mild, flat hearing loss at lower frequencies coupled with a gradually sloping hearing loss at higher frequencies) differs from audiograms associated with sensory losses resulting from ototoxic drug and noise exposures. To determine if age-related pathologies are seen in human audiograms, schematic boundaries for 5 audiometric phenotypes were defined, based on 5 hypothesized conditions of cochlear pathology: older-normal, pre-metabolic, metabolic, sensory, and metabolic + sensory (Schmiedt, 2010; Dubno et al., 2013; see Fig. 1). The combined metabolic + sensory phenotype is consistent with the notion that, in contrast to laboratory animals raised in quiet, audiograms of older adults likely reflect the effects of environmental exposures combined with age-related declines in the auditory periphery unrelated to these exposures. Evidence supporting metabolic and sensory phenotypes in audiograms from older adults was derived from demographic information (age, gender), environmental exposures (noise and ototoxic drug histories), and stability or changes in audiometric phenotypes as individuals age (Dubno et al., 2013).

Ongoing analyses designed to provide additional validation include assessing audiometric phenotypes with additional measures of auditory function measured longitudinally and confirming with biological markers (genetics and otopathology from human temporal bones). For genetic analyses, audiometric phenotypes provide a framework beyond classifying older adults as either “affected” or “non-affected.” The current

approach is to search for genetic associations and structural variations in genes related to metabolic vs. non-metabolic phenotypes using whole exome sequencing. Once genes are identified, pathological and potential functional consequence of genetic variations will be determined as they relate to phenotypes of age-related hearing loss, largely through studies of human temporal bones. Such information can also drive the development of mouse models with specific mutations. Future studies will apply this phenotypic approach to understanding neural presbycusis.

The research being conducted in the Hearing Research Program is unique in several ways, including its 27-year longitudinal study of hearing in older persons, extensive database of results from more than 1,500 participants, unique interdisciplinary collaborations and training programs of basic, translational, and clinical scientists, inclusion of innovative approaches to the study of age-related hearing loss, and its focus on a complex disorder of aging that contributes to poor communication abilities and reduced quality of life for millions of older adults.

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Front row: Susan Teubner-Rhodes, Ph.D., Nicole Sieck, BS, Kristen Quinones, MA, Richard Schmiedt, Ph.D. **2nd row:** Rutendo Chikuku, AuD, Jayne Ahlstrom, MS, Michelle Edwards, BS **3rd row:** Kenny Vaden, Ph.D., Kenyaria Noble, BA **4th row:** Judy R. Dubno, Ph.D., Kelly Harris, Ph.D., Hainan Lang, M.D., Ph.D., Yazhi Xing, M.D. **Back row:** Bradley Schulte, Ph.D., Lois Matthews, MS, Mark Eckert, Ph.D., LaShardai Brown, BA **Not pictured:** Jami Auslander, BS, William Bologna, AuD, Catherine Bridges, MS, Jennifer Davis, Sara Fultz, AuD, Paul R. Lambert, M.D., Amanda Maxwell, Ted R. McRackan, M.D., Ted A. Meyer, M.D., Ph.D., MS, John Mills, Ph.D., Clarisse Panganiban, BA, Chandrakala Puligilla, Ph.D., Habib G. Rizk, M.D., Su-Hau Sha, M.D., Annie Simpson, Ph.D.

Lucinda A. Halstead, M.D.

- Visiting Professorship, Royal Conservatory, Toronto, Ontario
- Visiting Professorship, Westminster Choir College, Princeton, NJ

Meredith A. Holcomb, Au.D., CCC-A

- 2016 Health Sciences Foundation Outstanding Clinician Award

Paul R. Lambert, M.D.

- American Otological Society Presidential Citation
- Visiting Professor, Baylor College Medicine
- Guest Speaker, Mexican Society of Otolaryngology-Head & Neck Surgery
- Roger Lehman Lectureship, Medical College of Wisconsin

Ted R. McRackan, M.D.

- Inducted into American Neurotology Society
- Received Doris Duke grant
- K12 grant

Shaun A. Nguyen, M.D., FAPCR

- Inducted as Fellow of the Academy of Physicians in Clinical Research (FAPCR)

Ashli K. O'Rourke, M.D.

- MUSC Otolaryngology Teaching Award
- Guest Speaker, Kansas Speech Language and Hearing Association
- Guest Speaker, Alberta College of Speech-Language Pathologists and Audiologists, Canada

Samuel L. Oyer, M.D.

- Jack R. Anderson Award for highest score on ABFPRS board certification exam for 2015

Krishna G. Patel, M.D., Ph.D.

- SCTR HIGH INNOVATION Grant
- First place, poster presentation at the COSM for Facial Plastic and Reconstructive Surgery Section

Rodney J. Schlosser, M.D.

- Distinguished skull base professor, Penn International Rhinology and Skull Base Course, Philadelphia, PA
- Distinguished guest, University of Arizona, ENT in the Desert Course, Tuscon, AZ
- Guest faculty, University of Southern California Endoscopic Skull Base and Sinus Surgery Course, Los Angeles, CA
- Guest speaker, Nassau Surgical Society, Long Island, NY

David R. White, M.D.

- Elected to SENTAC (Society for Ear, Nose, and Throat Advances in Children) Board of Directors
- Visiting Professor at NYU Department of Otolaryngology-Head and Neck Surgery

Farewell Residents & Fellows 2016



2016 Graduating Residents - Drs. Chris Ayers, Michael Moore, and Alex Sokohl, with Dr. Ashli O'Rourke, winner of the 2016 Teaching Award

With the addition of five new faculty members last year, the clinical load for the residents increased. The three graduating chief residents benefitted greatly from the additional learning opportunities. In this year's graduating class, **Dr. Chris M. Ayers** entered a general otolaryngology position with Augusta ENT in Augusta, GA. Dr. Ayers will practice mostly through their Aiken, SC office. Dr. Ayers was known for his leadership, intelligence and humor. In addition to his scholarship, he was a consummate family man. His research during residency included five publications with a broad range of focus. Dr. Ayers attended Clemson, and to say that he is an avid fan would be a gross underestimate of his commitment to the Orange and Regalia. Go Tigers.

Dr. Michael W. Moore leaves to become a general otolaryngologist with Rosewood ENT in his hometown of Houston, TX. Dr. Moore left Texas and was a collegiate swimmer at Boston College. He then attended medical school in Houston before coming to Charleston. During residency, Dr. Moore had three publications and one book chapter, and won the 2014 resident research award. On the morning of the 2016 Charleston Magnolia Conference, he presented his research wearing swim trunks under his suit. In a Superman-like transformation, Dr. Moore gave a great presentation, ripped off his suit, dove into the harbor and went on to win his age division in the open-water swim. Incredible.

Dr. Alex D. Sokohl likewise will join a general otolaryngology practice, Associates in ENT – Head and Neck Surgery in Chattanooga, TN. Dr. Sokohl was known for his teaching skills, kindness with patients, and communication with service providers in the hospital. In

addition, Dr. Sokohl loved the operating room. He graduated with more surgical cases than any MUSC resident to date. His efforts were recognized with Teaching and Patient care awards, in addition, Dr. Sokohl won an award for the top poster at the 2015 COSM meeting. Buena suerte, Alex.

The Department has also become a sought after center for advanced training in otolaryngology subspecialties, offering fellowships in sinus and skull base surgery; pediatric otolaryngology; otology and neurotology; and head and neck oncologic and reconstructive surgery.

We had a wonderful year with all of our fellows and wish them well as they move across the country to start their careers. **Jason D. Chesney, DO**, completed a fellowship in Pediatric Otolaryngology and will join Mid-Michigan ENT in East Lansing, MI. **Elizabeth A. Nicolli, M.D.** and **Sobia Khaja, M.D.** both completed an intensive fellowship in Head and Neck Surgery and will be joining the faculties at the University of Miami and University of Minnesota, respectively. Each of their practices will combine head and neck resection and microvascular reconstruction. **Arash Shahangian, M.D., Ph.D.** completed a fellowship in Rhinology and is back in the San Francisco Bay area serving as a rhinologist in the Kaiser system.

Dr. Ashli K. O'Rourke was honored by the residents with the annual resident teaching award. It is a well-deserved recognition for an individual who spends hours with residents in the lecture room, cadaver lab, and operating theater to make sure they leave MUSC with excellent training and skills.



Top: Drs. Arash Shahangian and Zach Soler, and Eleanor Soler

Middle: Drs. Jason Chesney and David White

Bottom: Drs. Terry Day, Elizabeth Nicolli, Sobia Khaja, and Joshua Hornig

Welcome to MUSC!

PGY2 Residents

The MUSC Department of Otolaryngology-Head & Neck Surgery welcomed four new PGY2s into service in July 2016.



Patrick F. Morgan, M.D. is from Norfolk, Virginia. He earned his B.S. in Chemistry at Clemson University. Patrick then attended Eastern Virginia Medical School in his home town of Norfolk, Virginia, where he was the president of the local chapter of Alpha Omega Alpha Honor Medical Society. He has co-authored several publications and presentations on pediatric otolaryngology and autism, sympathetic hearing loss, and venous malformations. In his spare time, Patrick enjoys playing golf, playing the guitar, and exploring Charleston and the surrounding Low Country.



Alex W. Murphey, M.D. is from Augusta, Georgia. He received his B.S. in Biology from the University of Georgia in Athens. He then returned to Augusta for medical school at the Medical College of Georgia. Alex loves to travel and while in medical school he worked at a cervical cancer clinic in Cusco, Peru and lived in Al Ain, United Arab Emirates with a pediatric otolaryngologist for five weeks. Alex enjoys being outdoors, playing golf, softball, basketball, and patiently awaiting the next national championship for UGA football. Go Dawgs!



Florence A. Othieno, M.D. was born and raised in Kenya. She attended the University of Texas at Arlington where she earned both her BS in Biology and Masters in Biomedical Engineering. She then worked on multiple projects in the fields of HIV and influenza virus research at both the University of Texas Southwestern Medical Center and the Centers for Disease Control. Florence graduated from the Medical College of Georgia. She enjoys cooking, crafts, outdoor activities and travelling.



Mitchell L. Worley, M.D. is from Easley, South Carolina. He attended Wofford College (go Terriers!), where he earned a B.S. in Chemistry and a B.A. in Mathematics. He attended Wake Forest School of Medicine where he was inducted into the Alpha Omega Alpha and Gold Humanism honor societies. As a medical student he co-authored research in Head and Neck surgery and participated in medical trips to Haiti and the Dominican Republic. Mitch and his wife, Alyse enjoy traveling, napping by the pool or on the beach.

2016-17 Fellows

MUSC offers otolaryngology fellowships in Head & Neck Oncologic and Reconstructive Surgery, Rhinology and Endoscopic Sinus/Skull Base Surgery, Pediatric Otolaryngology, and Neurotology. In addition to an extensive surgical experience, fellows benefit from a multidisciplinary approach by participating in outpatient clinics, rounds, and didactic conferences.



Sharon H. Gnagi, M.D.
Pediatric Otolaryngology Fellow
M.D.: University of Texas Medical Branch
Residency: Mayo Clinic Arizona
Special Interest: Pediatric Otolaryngology



Evan Graboyes, M.D.
Head & Neck Oncology Fellow
M.D.: Washington University School of Medicine, St. Louis
Residency: Washington University School of Medicine, St. Louis
Special Interest: Defining and measuring quality care in head and neck cancer patients



Jonathan L. Hatch, M.D.
Otology / Neurotology Fellow
M.D.: Creighton University School of Medicine
Residency: University of Nebraska Medical Center
Special Interests: Adult and pediatric hearing loss, cochlear implants, skull base surgery



Suhael R. Momin, M.D.
Head & Neck Oncology Fellow
M.D.: Case Western Reserve University
Residency: Cleveland Clinic
Special interests: Head and neck tumors, oncologic surgery and reconstruction



Jose L. Mattos, M.D.
Rhinology Fellow
MD: University of Virginia School of Medicine
Residency: University of Pittsburgh Medical Center
Special Interests: Rhinology and endoscopic skullbase surgery, outcomes research

To learn more about our residency and fellowship programs please visit our website at ENT.musc.edu

OTOLOGY & NEUROLOGY



Paul R. Lambert, M.D.

Professor and Chairman
Director, Otolaryngology
M.D.: Duke University
Residency: UCLA
Fellowship: House Ear Institute,
Los Angeles



Theodore R. McRackan, M.D.

Assistant Professor
M.D.: MUSC
Residency: Vanderbilt University
Medical Center
Fellowship: House Ear Clinic



Ted A. Meyer, M.D., Ph.D.

Associate Professor
Director, Cochlear Implant
Program
M.D. & Ph.D.: University of Illinois
Residency: Indiana University
Fellowship: University of Iowa



Habib G. Rizk, M.D., MSc

Assistant Professor
Director, Vestibular Program
M.D.: Saint Joseph University,
Beirut, Lebanon
Residency: Saint Joseph University
and Hotel-Dieu de France
Hospital, Beirut, Lebanon
Fellowship: MUSC



Mary Ann Howerton, PA-C

Physician Assistant
MSPAS: MUSC

RHINOLOGY & SINUS SURGERY



Rodney J. Schlosser, M.D.

Professor
Director, Nasal and Sinus Center
M.D.: Mayo Clinic
Residency: University of Virginia
Fellowship: University of
Pennsylvania



Zachary M. Soler, M.D., M.Sc.

Associate Professor
M.D.: Wake Forest University
Residency: Oregon Health and
Science University
Fellowship: Harvard Medical
School



**Mary Reames Rinehart, MSN,
FNP-C**

Family Nurse Practitioner
MSN: MUSC

Faculty *Otolaryngology - Head & Neck Surgery*

HEAD & NECK ONCOLOGY



Terry A. Day, M.D.

Professor and Director
MUSC HN Tumor Program
Wendy and Keith Wellin Chair in
Head & Neck Surgery
M.D.: University of Oklahoma
Residency: LSU-Shreveport
Fellowship: UC Davis



**Joshua D. Hornig, M.D.,
FRCS(C)**

Associate Professor
Director, Microvascular Surgery and
Functional Outcomes
M.D. & Residency: Univ. of Alberta
Fellowship: MUSC



Eric J. Lentsch, M.D., FACS

Associate Professor
M.D. & Residency: University of
Louisville
Fellowship: M.D. Anderson



David M. Neskey, M.D.

Assistant Professor
MD: Albany Medical College
Residency: University of Miami
Fellowship: M.D. Anderson



Roy B. Sessions, M.D.

Professor
M.D.: Louisiana State University,
New Orleans
Residency: Washington University
School of Medicine, St. Louis



Mary Beth Chalk, MSN, NP-C

Family Nurse Practitioner
MSN: MUSC



TK Garris, DNP, NP-C

Family Nurse Practitioner
DNP: MUSC



Cheryl A. Jones, DNP, NP-C

Family Nurse Practitioner
DNP: MUSC

PEDIATRIC OTOLARYNGOLOGY



David R. White, M.D.

Associate Professor
Director, Pediatric Otolaryngology
Director, MUSC Airway and
Aspiration Center for Children
M.D.: MUSC
Residency: UNC Chapel Hill
Fellowship: Cincinnati Children's
Hospital



Clarice S. Clemmens, M.D.

Assistant Professor
M.D.: MUSC
Residency: Hospital of the
University of Pennsylvania
Fellowship: Children's Hospital of
Philadelphia



**Christopher M. Discolo, M.D.,
M.S.C.R.**

Assistant Professor
M.D.: State University of New
York, Brooklyn
Residency: Cleveland Clinic
Fellowship: University of
Minnesota / Pediatric ENT
Associates



Carissa C. Howle, CPNP

Pediatric Nurse Practitioner
MSN: MUSC

EVELYN TRAMMELL INSTITUTE FOR VOICE AND SWALLOWING



Lucinda A. Halstead, M.D.

Associate Professor
Medical Director, ETIVS
M.D.: George Washington
University
Residency: New England Medical
Center, Boston



Ashli O'Rourke, M.D.

Assistant Professor
M.D.: Medical College of Georgia
Residency: University of Virginia
Fellowship: Medical College of
Georgia

FACIAL PLASTIC & RECONSTRUCTIVE SURGERY



Krishna G. Patel, M.D., Ph.D.
Associate Professor
Director, FPRS
M.D. & Ph.D.: Medical College of Georgia
Residency: UNC Chapel Hill
Fellowship: UC Davis



Samuel L. Oyer, M.D.
Assistant Professor
M.D.: Indiana University
Residency: MUSC
Fellowship: Johns Hopkins Hospital



Judith M. Skoner, M.D.
Assistant Professor
M.D.: University of South Carolina
Residency: MUSC
Fellowship: Oregon Health and Science University

RESEARCH



Judy R. Dubno, Ph.D.
Professor, Director, MUSC Hearing Research Program
Ph.D.: City University of New York



Jayne B. Ahlstrom, M.S.
Instructor
MUSC Hearing Research Program
M.S.: Vanderbilt University



Mark A. Eckert, Ph.D.
Associate Professor
MUSC Hearing Research Program
Ph.D.: University of Florida



Kelly C. Harris, Ph.D.
Associate Professor
MUSC Hearing Research Program
Ph.D.: University at Buffalo



Shaun A. Nguyen, M.D., FAPCR
Professor
Director, Clinical Research
MD & Residency: University College London
Fellowship: MUSC



Betsy K. Davis, D.M.D., M.S.
Associate Professor
Director, Division of Maxillofacial Prosthodontics
D.M.D.: MUSC
Residency: University of Iowa
Fellowship: M.D. Anderson ; UCLA



J Rhet Tucker, D.M.D.
Assistant Professor
D.M.D.: University of Pennsylvania
Residency: U.S. Army
Fellowship: M.D. Anderson

GENERAL OTOLARYNGOLOGY & ALLERGY



Mark J. Hoy, M.D.
Assistant Professor
Director, General Otolaryngology & Allergy
M.D.: Temple University
Residency: University of Louisville



Robert C. Waters, M.D.
Clinical Assistant Professor
M.D.: MUSC
Residency: Barnes Hospital
Washington University School of Medicine



Claire O'Bryan, ANP-C
Nurse Practitioner
MSN: MUSC



Lois J. Matthews, M.S.
Instructor
MUSC Hearing Research Program
M.S.: Purdue University



Kenneth I. Vaden, Jr., Ph.D.
Research Assistant Professor
MUSC Hearing Research Program
Ph.D.: University of California, Irvine



Jennifer K. Mulligan, Ph.D.
Assistant Professor
Rhinology & Sinus Surgery
Ph.D.: MUSC



M. Rita I. Young, Ph.D.
Professor
Head and Neck Research
Senior Research Career Scientist,
Ralph H. Johnson VA Medical Center

AUDIOLOGY



Kimberly A. Orr, Au.D., CCC-A
Director, Audiology
M.A.: Ohio State University
Au.D.: A.T. Still University



Elizabeth Camposeo, Au.D., CCC-A
Instructor
Au.D.: Northwestern University



Laura A. Droege, Au.D., CCC-A
Instructor
M.A.: Northern Illinois University
Au.D.: A.T. Still University



Meredith A. Holcomb, Au.D., CCC-A
Clinical Assistant Professor
Clinical Director, Cochlear Implant Program
Au.D.: UNC Chapel Hill



Cortney J. Hudak, Au.D., CCC-A
Instructor
Au.D.: University of Akron/Kent State University



Elizabeth A. Poth, Au.D., CCC-A
Instructor
M.S.: UNC Chapel Hill
Au.D.: A.T. Still University



Michelle L. Reiter, Au.D., CCC-A
Instructor
Au.D.: UNC Chapel Hill



Christine C. Strange, Au.D., CCC-A
Instructor
M.A.: SUNY Plattsburgh
Au.D.: A.T. Still University



Yolyn Sung, Au.D., CCC-A
Instructor
Au.D.: Vanderbilt University



Department of Otolaryngology - Head & Neck Surgery

135 Rutledge Avenue, MSC 550
Charleston, SC 29425-5500
Phone 843-792-8299
ENT.musc.edu

Paul R. Lambert, M.D.

DEPARTMENT CHAIR, EDITOR-IN-CHIEF

Zachary M. Soler, M.D., M.Sc.

EDITOR

Alison Padlan-Gillette

CREATIVE & PRODUCTION MANAGER

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Upcoming CME Events

31st Annual F. Johnson Putney Lectureship in Head & Neck Cancer

November 11, 2016 Hollings Cancer Center, MUSC Campus

This 1/2 day lecture will bring together world class Head & Neck Specialists to discuss the latest quality measures in oral cavity/head & neck cancer.

F. Johnson Putney Lecturer in Head & Neck Cancer:

Jeffrey N. Myers, M.D., Ph.D. FACS, MD Anderson Cancer Center

The Charleston Pediatric ENT Update

February 11, 2017 Courtyard Charleston Historic District

A comprehensive full day course designed to provide pediatricians, family practitioners, and otolaryngologists with up-to-date guidelines to implement in their daily practice, promote quality and efficient care, and tackle challenging ENT diagnosis with confidence.

Temporal Bone Dissection Course

March 24 - 25, 2017 MUSC Campus

Lectures & hands on labs focused on procedures for chronic ear disease. For practicing otolaryngologists.

Southern States Rhinology Course

March 29 - April 1, 2017 Kiawah Island and MUSC Campus

This course is intended for practicing Otolaryngologists and will feature presentations on topics for the practicing rhinologists and sinus surgeons. A hands-on laboratory dissection is available, featuring state-of-the-art endoscopic instrumentation, video, and image guidance systems.

17th Annual Charleston Magnolia Conference

June 2 - 3, 2017 Embassy Suites Charleston Historic District

Two half-day sessions covering the broad spectrum of Otolaryngology – Head and Neck Surgery. The lectures and round table discussions are specifically aimed at the practicing otolaryngologist. There will be ample opportunity for questions, comments, and presentation of cases by the audience. Our goal will be to review and to provide the latest information on a broad range of topics, so that optimal diagnostic and management strategies can be formulated.

The Charleston Course, 7th Annual Otolaryngology Literature Update

July 14 - 16, 2017 Kiawah Island Golf Resort

In three days, more than 100 manuscripts will be reviewed, and those “pearls” important to your practice will be emphasized. I believe that there may be no better way to stay current in our field than with this Literature Update Course.

For course registration or more information:

Julie Taylor (843) 876-0943, taylojul@musc.edu

More information coming soon, please check our website often: ENT.musc.edu

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